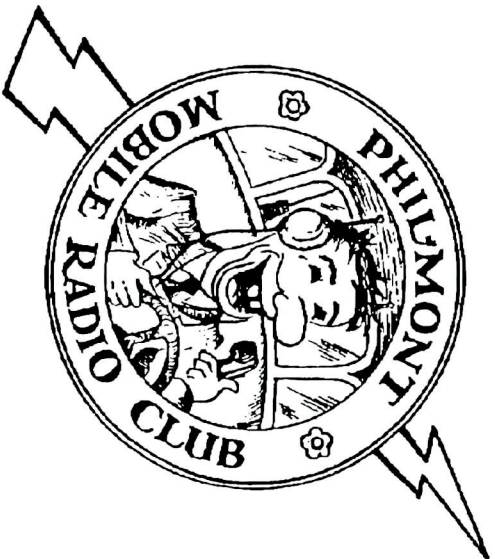


FIRST CLASS MAIL



A Publication of
THE PHIL-MONT MOBILE RADIO CLUB, INC.
2113 EDGEHILL DRIVE, FURLONG, PA 18925

VIRGINIA J. HARING
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FURLONG PA

W3IIN
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THE BLURB



PHILMONT MOBILE RADIO CLUB
W3RQZ • W3TKQ • W3QV



July 1991
A TIME FOR
FUN LEISURE
ADVENTURE



is published monthly by, and for, the members of **The PHIL-MONT MOBILE RADIO CLUB, INC.** whose purpose is to promote Amateur Radio in general, and Mobile Radio in particular. Copying and quoting is permitted with a credit line. We gladly exchange publications with other amateur radio clubs; requests should be sent to the Editor. BLURB subscriptions are available to non-members for \$10.00 addressed to the Treasurer. The club meets at 7:30 PM on the first non-holiday WEDNESDAY of every month at The Franklin Institute, 20th Street and the Benjamin Franklin Parkway, Philadelphia. Use the Winter Street (north side) entrance.

ALL VISITORS ARE WELCOME!

Amateur Radio License Examinations - the first non-holiday THURSDAY of every month at The Franklin Institute - doors close at 6:30 PM-SHARP!

CLUB INFORMATION

24-Hour Information Number at W3TKQ **-(215) 448-1139**
Repeater frequencies: 147.03 (Bucks County input requires 131.8Hz PL)
444.80 MHz (186.2 Hz PL)
Simplex frequency: 147.51 MHz
Mailing Address: P.O. Box 88, Abington, PA 19001

STATIONS

W3QV - 147.03 MHz. Repeater - 8200 Ridge Avenue, Philadelphia, PA - Trustee W3BBB
W3RQZ - 1176 Old York Road, Abington, PA - Trustee W3VVS
W3TKQ - The Franklin Institute, Philadelphia, PA - Trustee W3PWG
ALL LICENSED AMATEURS ARE WELCOME TO OPERATE W3TKQ.

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Special Liaison to The Franklin Institute: AK2I

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N3DHI, WB3KOJ

Assistant Editor/Typist: W3IIN

DEADLINE: To be assured of publication in the current month, all copy **MUST** be in the hands of the Editor at the Bored of Directors' Meeting!

NET SCHEDULE

SUNDAY	09:30	147.030	MHz FM	"SUNDAY MORNING 2 METER NET"
	10:00	28.993	MHz SSB	"10-ON-10 NET"
	10:20	3.993	MHz SSB	75 METER NET
TUESDAY	20:00	147.030	MHz FM	CW PRACTICE NET (SUMMER RECESS)



APPLE BYTES

Don Gordon, WB3KOJ

JULY BIRTHDAYS

02 Alice Popovic (XYL N3FVI)
04 Marion Blum (XYL N3AXJ)
06 Edna McVaugh (XYL W3LEM)
09 Donna Rush (XYL KD3VS)
10 Natalie S. Gordon - WB3KOH
Lew Lewis - AG2H
Louis Rulli - WB2WOM
12 Grace Smith (XYL K3GBA)
14 William C. Clayton - K3HIE
Lawrence J. Clifford - W3UY
20 Irwin Miller - K3KNH
23 Theresa Henderson (XYL KA3MHO)
24 Peggy Snyder (XYL W2HSA)
25 Jinny Haring - W3IIN
28 Frankie Gilpin (XYL W3SRU)
31 Stephen C. Hoch - KA3AMO

WHERE PHIL-MONT LIVES

ZIP CODE 19083 - 6
ZIP CODE 19128 - 5 (WARNING! ENTRY VISA REQUIRED)
ZIP CODE 19018 - 4

HELP PHIL-MONT

Are you planning to join **ARRL** or renew your current membership?
Help Phil-Mont by joining or renewing through the club.
Contact **KB3IV** for the details.

Hello Phil-Mont,

Thank you one and all for allowing me to come to one of your meetings, and to participate in the Corestates Bicycle Race.

I have made many friends there, and want to let you know you have a super membership.

Thanks to Steve, Dr. Mark, Dr. Alfred, George, Brad, Dino, Ed, and many more for their QSOs.

Please start [a BLURB] subscription for one year to:

P.O. Box 2811, Ocala, FL 32678

73,
Dave Glorius, N4FHP

REPEATINGS

Congratulations to Gerry Mathis, W3GM, from Pennsburg, PA, who received this year's "Grand Ole Ham" award at the ARRL Atlantic Division Convention in Rochester, NY... 'Happy to hear that past-president N3EAY, now living in Deltona, FL, has recently taken a *BLURB* subscription. Perhaps he'll keep us up-to-date via Jack's BBS, now and then... Good news, Sam Kuncovich's XYL's health is improving. He's anxious to start preparing for his no-code license, but needs someone to help with the questions. 'Anyone able to help? Considering all that Sam has done for the club over the past 33 years, surely someone can give him a hand! Please contact the editor if you're willing... Our old friend W2FXU, Russ Hamilton, will cease editing *The Hilltopper* newsletter of the Tompkins County ARC at the end of the year. We hope this doesn't mean that we'll no longer be enjoying his witty articles!

Sam's
CORNER

BRAD-N₃GLH
WANTS
TO KEEP TABS
ON HIS BRIDE
TO BE...
HER ENGAGEMENT
DIAMOND
IS EQUIPT
WITH A CATS
WHISKER!



The PREZ SEZ

Bill Popovic, N3FVI

Thanks to all the volunteers who participated in the Core States Bike Race. Two ambulances were called by amateurs, one for a broken leg and the other a bicyclist with leg and knee injuries. More possible injuries were avoided by radio amateur reports of hazardous conditions.

I hope everyone enjoyed Family Night as much as I did. The turn-out was so great we will try to make it an annual event.

The July meeting topic will be Mobile Rigs. If you would like to share your positive or negative opinion of a radio, bring it along and share your experience.

The speaker for the August 7th meeting will be Bob Dingler from the Shadow Traf-

fic Network. Shadow supplies traffic and road hazard information to thousands of motorists daily. If you're interested in reporting information to Shadow, contact N3GEN or me. It is an easy way to report accidents, road hazards, or traffic problems, especially when you're not sure which township to call. (Shadow donated the four metal consoles that will be part of the main console at W3TKQ.)

No negative waves please. If you have a problem with someone's repeater etiquette, please call them or me on the phone. Let's keep "03" a pleasant place to listen, and remember: many monitor our repeater, so think before you speak.

74th MONTHLY VE SESSION STATISTICS JUNE

15 candidates pass 23 elements
5 new amateurs plus 8 upgrades

Thanks to the members of our VE team:
ND3Q, Dusty Rhoads, Chairman
W3FZR, Niel Leone; N3IEI, Chris Brady; NZ3Q, Ted Coats; KA3SWU, Joel Kliengunther; NS3Y, Sal Valente

AMATEUR LICENSE EXAMS HELD ON THE FIRST
NON-HOLIDAY THURSDAY OF EVERY MONTH

Registration begins at 6:00 PM

Doors close at 6:30 PM sharp

THE FRANKLIN INSTITUTE

For Information Call ND3Q at
(215) 482-0386 or 879-0505

Accessible by the handicapped.



* UPDATE *

July 3 **General Meeting Program:**
MOBILE RIGS

July 11 License Examinations
July 17 Directors' Meeting at
W3BBB's

Aug 1 License Examinations
Aug 7 **General Meeting Program:**
SHADOW TRAFFIC
Aug 14 Directors' Meeting at
W3IIM&N's

Sep 4 **General Meeting**
Sep 5 License Examinations
Sep 18 Directors' Meeting at
N2CYA & KC2HX's

Oct 2 **General Meeting Program:**
W3TKQ Dedication
Oct 3 License Examinations
Oct 16 Directors'
KA3AMO

HAMFESTS

Jul 28 TIMONIUM, MD
BRATS

Aug 11 WARRINGTON, PA
MARC

Sept 8 GAITHERSBURG, MD
Foundation for Amateur Radio

Sept 15 PENNSAUKEN, NJ
South Jersey RA

Sept 21-22 YORK, PA
York ARA

Oct 6 GARDEN STATE RACETRACK
Pack Rats

Oct 13 JERSEY SHORE

CLUB INFORMATION

24 Hour Information Number at W3TKQ
(215) 448-1139

ALEM, PA
Wireless Assoc.

V.E. TEST LOCATIONS

Confirm all information, in advance, with the contact person. Licensed applicants must bring their original license and one photocopy of it. All applicants, including children, must present positive ID. Also bring the original of any Certificate of Successful Completion needed to prove current status. The ARRL VEC's 1991 test fee is \$5.25; there is no charge for a Novice test.

BELLMAWR, NJ
Monthly, 3rd Thursday
Bill Helmatag
(609) 546-7710

BRYN MAWR
Bob Haase, W3SA
(215) 293-1919

•••••
CENTER CITY PHILA.
• Monthly, 1st Thursday
• Dusty Rhoads, ND3Q
• (215) 482-0386
• (215) 879-0505
•••••

LEVITTOWN
Dave Munson, NM3K
(215) 788-7515

TELFORD
Monthly, 3rd Monday
Warren Erdman K3ZXQ
(215) 679-5764

WARMINSTER
Last Wed., Odd Months
Tom Michaud, WA3TQJ
(215) 343-3494

WHAT YOU SHOULD KNOW ABOUT NICAD BATTERY PACKS

CAPACITY: Expressed in terms of ampere hours (ah) or milliampere hours (mah). This is a measure of the discharge rate needed for the battery to drop one volt per cell within one hour. For example, a fully charged 4 ah battery used with an HT needing 2 ah current will discharge in approximately 2 hours. When a battery pack's capacity drops to 80% of its rated capacity, it should be replaced.

VOLTAGE: When in use, the voltage of the nicad battery pack is about 1.2 volts per cell. This voltage remains until the cell approaches discharge. In normal operation, the voltage should not drop below 1.1 or 1.0 per cell. Note: if the battery pack is used to provide current above the rated value there will be a severe drop in voltage when discharge is approached. This reduces the capacity and can render the battery pack useless.

CYCLES: Used to measure the life of a battery pack, a cycle is a full charge and subsequent discharge. Nicad battery packs should last 1,000 or more cycles (two to three years of use assuming eight hour days, five days a week) under normal conditions.

POLARITY REVERSAL: This occurs when one of the cells reaches zero voltage before the others. Because all cells are connected in series, a reversal in polarity occurs. Although this situation can be reversed, it should be avoided since, if done repeatedly, it will shorten the life of the battery pack.

MEMORY EFFECT: Although more common in the power plate batteries of yesteryear, this can still occur if the proper care isn't given. When a repeated shallow discharge of the same amount occurs more than 200 times, a battery can show a memory effect. This rarely occurs with normal use. Even if it was to occur, the battery will seem to have a reduced capacity of only about 10% which is not noticeable. This means you'll still have access to 90% of its original capacity.

FACTS

1. Be sure to use the charger that was designed for the type and capacity of the battery pack to be charged. Continuous overcharging may shorten battery life.
2. Always use a charger that switches to a trickle charge after the battery reaches 60 to 80% of full charge. This avoids battery damage caused by charging a battery at greater than a 10 hour rate for long periods of time.
3. Undercharging a battery causes the most damage. The causes for this are usually one of two.
 1. Mismanagement
 2. Defective charger
4. Do not fast-charge batteries that have been stored for more than 6 months. Start them off on a slow charge over a 14 to 20 hour period. After the first charge (slow charge) a fast charge can be used for subsequent charges.
5. Never fast charge batteries below 40 deg f. Chemicals react slower below this temperature. This means a battery pack can't accept high current. If a high current were used to charge the battery under these conditions, pressure will build up in the cells and there will be a loss of capacity.
6. Check new battery packs as they arrive to be sure the capacity is still at the level needed for your equipment.
7. Check the capacity of nicad battery packs every three months when used every day. Check every six months when used less often. If the battery is less than 80% of its rated capacity, then the battery is near the end of its life and should be disposed of.
8. Avoid deep discharges. If a battery should be discharged below one volt per cell, polarity reversal may occur and the battery would be rendered useless.
9. Avoid short circuiting the battery pack, this can be done carrying them in your pocket with coins or keys. If a pack short circuits you'll probably burn your fingers or something else, all according to which pocket it is in.
10. Resist the temptation to buy extra battery packs on sale, then let them sit idle for long periods of time. Battery packs that have sat idle for a long period of time may take as many as ten cycles to bring back to capacity.
11. When storing batteries be sure to store them in a cool place. Storing batteries in high temperatures causes the battery to self discharge, speeding natural deterioration and reducing capacity.

WB2ZJF via WB3JOE and K3JJQ

hears no signal for a period of 2 minutes and 39 seconds, it will automatically turn-off the timer. When you're finished using the OSR in timer mode, you should manually turn-off the timer with the # key.

Beep, Bop, Boop

Because the OSR retransmits your signal to Roxborough via a 450 MHz link frequency, you'll hear the "450 beep" in addition to the normal chime courtesy tone. It's a quick way to find-out whether the OSR is 'hearing' you.

Timer considerations

When the OSR is "active," the main-site receiver is disabled. If you're in a poor reception area for the OSR, but in a good location for the Roxborough receiver, when the timer is on, your poorly received signal will be the one that's heard! If you've turned-on the OSR with the timer, ALL parties in the conversation will be retransmitted by the

OSR (if it hears the signal at all), possibly causing extremely noisy reception. So... if you need to use the timer, remember to turn it off (#) at the end of your transmission, unless the other party also wants to use it!

"PL" vs Voting

"PL" steering requires manual switching decisions by the user. The use of a "voting" system eliminates all such decisions because the hardware chooses the proper receiver input. Just like the "cellular" telephone system, users don't even have to know where the receivers are located.

More OSRs are in the planning stages. If "PL" steering is used, you will have to know each receiver's individual "PL" frequency. If a "voting" system is ultimately installed (albeit more expensive, and much more complicated to design and maintain), all switching would be handled automatically without the users' knowledge.

Stay tuned for a report, and recommendation, from the repeater committee.

SAM'S
CORNER

SAM K3GBA
HAS AN RV THAT IS
GATHERING DUST!
SEEMS A SHORT
IN A CONTROL
CIRCUIT HIS DELAYING HIS
CROSS COUNTRY TRAVELS!



MINUTES

JUNE GENERAL MEETING

No official minutes were recorded due to the "Family Night" festivities.

Acceptance of "Amateur of the Year" Award and Jake spoke...

Prior to my being called upon by Hugh Turnbull, Director of the Atlantic Division for the ARRL, the Rochester Hamfest Banquet Committee had a short skit depicting the judging of the Hamfest Chairman, Harold Smith, K2HC, in a free fall he took on hard concrete steps after missing one of those steps in his haste to get to another meeting. The Russian judge gave him (with signs held up) a 58, the Japanese judge gave him a 59, while the Polish judge gave him a 29 (with the signs held upside down and backwards). Everyone had a great laugh. I saw it as an opportunity.

At the podium, I said, "Before I make any comments, one thing that Hugh failed to tell you about me was that I am Past President of the Polish Anti-Defamation League, and I certainly enjoyed your skit." I asked Hugh, "just how do you spell your name again?" By that time everyone was a loose as could be expected.

My acceptance speech was as follows:

"It is indeed with great pleasure and humility that I accept this award for the Atlantic Division Amateur of the Year. I hope in some way that my efforts have contributed to the advancement of the hobby, but more than that, I hope that others might be encouraged to use a mode of operation, in their amateur radio work, that I have found most gratifying, and that mode is the "sharing" mode.

"Each of us, everyone here present right now, has a specific talent that can light the candle of opportunity for others. Each of us has the ability to share with another the spark of enthusiasm that can set another to search, and either renew or generate another's interest. Examine yourself, and search your own mind, and think of the many ways that you have been helped by others. Then do the same, either in a small or a large way, whatever degree of the giving mode that satisfies you most.

"Thomas Huxley once said, 'The great end of life is not in knowledge but action'.

"Do it now, enter the world of giving of yourself for the sake of others, and you'll find a world of personal satisfaction never before dreamed.

"On behalf of the members of the Phil-Mont Mobile Radio Club in greater Philadelphia, who really deserve this honor, I accept this award, and thank you, oh, so very much."

AK2I

WARC-92: JUST EIGHT MONTHS TO THE OPENING GAVEL!

David Sumner, K1ZZ Executive Vice President, ARRL

In just eight months, the 1992 World Administrative Radio Conference (WARC-92) will convene. Telecommunications administrations in every corner of the world are now putting the finishing touches on their proposals for the conference. Soon, what's in store at WARC-92 for radio amateurs and other users of the radio spectrum will come into better focus.

Already, we know a great deal about what we will face at WARC-92. New uses of the radio spectrum are seeking access: CD-quality sound broadcasting, new generations of personal communications services such as cellular telephones and their data counterparts, mobile satellites, wind profiler radars, and new space services are but a few. Shortwave broadcasting is seeking to expand.

The technical foundations for the conference have already been laid, at a series of international meetings where you were represented by both ARRL (as a part of the official United States delegation) and IARU. Thanks to the work that has already been done, there are serious threats to Amateur Radio in just a few places in the spectrum - although we must always be alert to the possibility of new challenges.

This special issue of *WARC Countdown* brings you up to date on these threats, and on what is being done on your behalf to meet them.

AMATEUR RADIO SPECTRUM UNDER ATTACK

There is no shortage of ideas of new ways to use the radio spectrum. What there is a shortage of, is spectrum that can be used. It's all been allocated already. Where will new and expanding services go? Which of the established users of the spectrum will be protected, and which will be required to

make way for the new? This is what WARC-92 must decide.

Amateur Radio is not alone in being threatened. In fact, a number of other radio services face even greater problems at WARC-92. If expansion of shortwave broadcasting occurs, it will be mainly at the expense of the Fixed Service (including the military). Land mobile, mobile satellite, and personal communications services are eyeing spectrum now used for private microwave links. Digital audio broadcasting and aeronautical flight test telemetry are locked in a bitter battle over spectrum around 1.5 GHz. We must work to make sure their problems don't become our problems.

Not that we're without problems of our own. Shortwave broadcasters desperately want more channels between 3 and 10 MHz, but this is where the Fixed Service has its greatest need. Inevitably there will be pressure on the amateur 40-meter band, and perhaps on other bands as well, either directly or through the "domino effect" as the Fixed Service is forced to make room for broadcasters.

Our bands between 100 MHz and 1 GHz are possible targets for low earth orbit (LEO) mobile satellite systems. Our preparatory work within the U.S. has reduced the risk, but we won't be certain of victory until the conference closes.

The band at 2300-2450 MHz is under great pressure from digital audio broadcasting (both satellite and terrestrial), mobile satellites, and other mobile and personal communications services. The lower portion of the 2400-2450 MHz band is especially important for amateur satellites, and it would be a major setback if we were to lose the access that we won after a hard battle at WARC-79.

So far we've managed to head off any other U.S. proposals that might impact Amateur Radio, but these proposals are still

"RADIO FURLONG"... is that DX or something? Jack Haring, W3IIM

Every repeater has areas of poor coverage, even though ours has often been praised, by visitors to the area, as one of the best! Still, we, who use it regularly, know where the dead spots are.

Recently, the repeater committee has been experimenting with adding off-site receivers (OSRs), the first of which has been located in Furlong, PA (the editor's house) near Doylestown. So far, the results have been positive.

Those of us living in the "Northeast" have long been suffering the poor reception by our main-site receiver at Roxborough. The original plan was to put an OSR on the CHI Institute building in Southampton, but for initial testing, temporarily install it in Furlong. Now that it's working in Furlong, we've found that the added height above sea level (360' vs 270'), and the location farther north, appears to be giving us better cover-

age than originally planned. Reports are that users often 'lose' (can't hear) the repeater, while still able to be heard through the OSR. Tests continue, primarily with antennas.

OK, so how do I use it?

The OSR listens on the same frequency as does the main-site receiver (147.630). At the present time we're using "PL steering" to activate it, but there are two ways to use the Furlong OSR.

If you have "PL" (the preferred method), you can open the receiver with a 131.8 Hz tone.

If not, you can still activate the receiver, in "timer mode," by pressing #9 on your keypad. This will open the receiver to any, and all, signals that it hears (weak or strong). The timer will remain ON as long as it hears a signal (of course, there are time-out considerations to be remembered). If the OSR

SAME
OTHER
CORNER

SURGEONS JIM
& RICK, HAVE
DONE SOME
CORRECTIVE
SURGERY
TO PUT JACK'S
RADIO FURLONG
BACK ON THE AIR!



road just off the main highway. It looked like the Lost Patrol, going around in circles only to come back again to the place where they started. You see, when I asked my wife, the caravan navigator, to locate a place where we could get off the highway for a rest stop as well as breakfast, she promptly gave me the route number just up ahead but failed to tell me there was a North exit as well as a South exit. In most cases such as this you're going to be right 50 percent of the time, but this time I was wrong and the entire group followed like dutiful children—even though I immediately got on the air on 27 MHz and told them to take the southern exit. After my apology to both my wife and the caravan, we put in a nice long rest stop at a restaurant and had a great time talking about the entire affair. It turned out to be the highlight of the whole trip, and a funny one at that.

We arrived in Corning, New York, later that afternoon, and camped for the night about four miles out of town at the Ferenbaugh Campground, really not much, except it had all of the needed facilities. In Corning, most of us were anxious to get to the Corning Glass Center and visit the Museum of Glass, The Hall of Science and Industry, and finally the Steuben (pronounced Stew - BEN) Factory where the glass blowers were hard at work. At the Glass Museum we saw an astounding array of glass artifacts, including part of the world's greatest collection of vases fashioned in Iran, during the 10th century A.D.; the famous Tiffany Studios creation 11 foot high leaded glass window made in 1905, personally supervised by Louis Tiffany; and an exquisite example of carved glass, made during the Ch'ien Lung dynasty in the 18th century. In the Hall of Science we saw the first 200" casting of the mirrored glass disk for the telescope at Mt. Palomar, and at the Steuben Factory, actually watched the skilled craftsman turn globes of molten glass into exquisite

pieces of Steuben crystal.

The following morning our usual check-in on the Rooster Net, and an attempt to try to get someone at W3TKQ, but with little success. The caravan proceed nicely, and after several stops and beautiful country side, we arrived at the official rally site at the Erie County Fair grounds where we were among the first 100 to arrive. That gave us preferred parking with all facilities, and because of that very reason, the caravan was a success, and I became a "lucky caravan leader."

The next few days saw a ride on the Erie Canal, towed by two mules, at the rate of 3 miles per hour, a super luncheon that afternoon, and an evening at the races for all. What a great time we had! The next day saw an old-time auction, followed by a tow car rally, a driving safety seminar, a Reese Hitch seminar, and then an evening of square dancing for all. By the time evening rolled around, I was not in the mood for square dancing, but we watched.

One visit I must tell you about is a trip to the first Basilica in the United States, Our Lady of Victory in the town of Lackawanna, New York. The paintings done by Italian artists of the time were magnificent to behold, the statues, all done in Italian marble were like photographs of the original person, capturing the expressions of grief, despair and agony on each face in a most stimulating manner. Gazing into their eyes brought chills, they were so life like. Finished in 1926 after only five years of construction, you must see the Basilica, so named to denote the Home of the Pope, on official visits, if ever you're in the area.

As usual it's over oh too soon, and, even after four more days of really enjoyable events and sight-seeing in the local area, it is very difficult to say "see you 'on the road again'."

tentative and could change between now and mid-June. August or September QST will carry details of the proposals the U.S. finally sends off to Geneva.

ROOM FOR OPTIMISM ON 40 METERS, OTHER HF BANDS

A number of administrations, including the United States, are indicating that they intend to protect amateur HF spectrum at WARC-92.

The FCC WARC-92 Industry Advisory Committee has recommended that there be "no intrusion into the amateur bands" at HF, and has recommended elimination of the "long standing inconsistency between Regions at 7100-7300 kHz that does not fully satisfy the needs of either the broadcasting or the amateur service." So far, the U.S. proposals are consistent with this recommendation and call for a worldwide, 300-kHz amateur allocation at 6900-7200 kHz with the bottom 100 kHz also available to the land mobile service on a secondary basis (i.e., no interference to be caused to amateurs). Of course, this would be a substantial improvement over the status quo. The transition would not occur for 15 years, providing plenty of time for any necessary modifications of equipment or antennas.

A working group of the Interamerican Telecommunications Conference, meeting in Washington the week of May 6, recommended that "there should be no intrusion into or reduction of the amateur or amateur-satellite service bands from 3.5 to 10 MHz." (There are no known proposals that would impact the amateur HF bands above 10 MHz).

A number of European administrations have agreed that any expansion of HF broadcasting should involve no intrusion into amateur bands, although an attempt should be made to simplify and align the different Regional allocations... in the vicinity of 7 MHz." Also, where possible, any HF broad-

casting expansion should not be in bands adjacent to low-power services such as the Amateur Service. Their draft proposals include a worldwide amateur band of 6900-7100 kHz, a 100% increase in the size of the band in Europe, Asia, Africa, and Oceania, with worldwide broadcasting above 7100 kHz. Amateurs, citing strong need for the wider band that now exists in Region 2, continue to argue for a 300-kHz worldwide amateur allocation.

In proposing a substantial expansion for HF broadcasting, All India Radio avoided intruding upon amateur bands.

This support for Amateur Radio did not develop spontaneously or by accident. It's evidence of a lot of hard work by our IARU colleagues overseas as well as by your ARRL representatives here at home.

WARC-92 SITE SELECTED: IT'S TORREMOLINOS

Torremolinos, a small city in southern Spain, has been selected as the site for the 1992 World Administrative Radio Conference. A popular destination for European tourists at other times of the year (WARC-92 is being held in February), Torremolinos has a world-class conference center and the other facilities needed for a large international meeting.

The city is well known to the International Amateur Radio Union. Just last year, it was the site for the IARU Region 1 Conference which brought together representatives from more than 50 countries. The IARU Region 1 Conference was opened by ITU Secretary-General Pekka Tarjanne in the very hall where he will open WARC-92 next year!

Arrangements for office facilities, accommodations, and other logistics for the IARU observer team are proceeding smoothly, thanks in part to the experience gained at the Region 1 Conference.

⇒



ARRL AND THE IARU

The American Radio Relay League (ARRL) was founded in 1914 by Hiram Percy Maxim, W1AW. At the time, radio communication by amateurs over long distances was just a dream.

The dream became reality in the early 1920s, with the discovery of the special properties of the "short waves." Suddenly, Amateur Radio was an international phenomenon and it needed an international spokesman. Maxim, always quick to recognize such a need, convened meetings in Paris in 1924 and 1925 that led to the formation of the International Amateur Radio Union (IARU).

The IARU faced its first major test at the Washington International Radiotelegraph Conference in 1927. It has been the recognized international organization for Amateur Radio ever since, and is regularly invited to participate in the work of the International Telecommunication Union (ITU).

Virtually every country of the world that has a national organization of radio amateurs is represented in the IARU federation. ARRL is one of the 127 IARU member-societies. ARRL also serves as International Secretariat of the IARU, providing headquarters facilities for IARU at no charge.

In recent years, the three regional organizations of IARU have assumed more of the burden and a greater role in its work. ARRL is a member of IARU Region 2, which encompasses the Americas, and also of IARU Region 3, by virtue of our full members in the Pacific islands, and contributes financially to both.

HELP PROTECT A PRECIOUS PRIVILEGE

Access to the RF spectrum is a precious privilege. Amateur Radio exists today because an earlier generation of radio amateurs, working through the ARRL and the IARU, earned that privilege for us. In a

climate that favored tight control over spectrum access, they persuaded our own government and the other nations of the world to let ordinary citizens use the spectrum for technical investigations and the exchange of ideas.

It was a lifetime ago that they earned this privilege. It was their legacy to us. Today, its protection is our most important mission.

Amateur Radio is being well represented in WARC-92 preparations, and will be equally well represented at the conference itself. Remember WARC-79, where even more was at risk yet we emerged with new bands? ARRL and IARU are using that experience in preparing for WARC-92. An experienced team, mostly volunteers taking time away from their jobs and families, will be there for you at the conference.

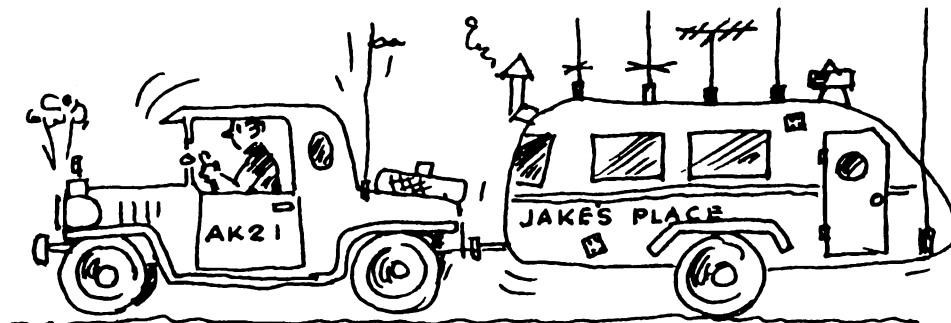
Even with dedicated volunteers, effective coordination of a worldwide effort takes money. Maintaining an effective presence at a five-week-long international conference takes money. Last fall, we asked League members to contribute toward the extraordinary expenses of WARC-92. Thousands of you gave generously. Now, as we enter the home stretch, we're asking once again.

Please help build the Frequency Defense Fund so it will be big enough to do the job. Please give as if the future of Amateur Radio depended on it. It does.

Editor's note: your Board of Directors has made a contribution in the club's name... Whether or not you're a member of the ARRL, please consider making a personal contribution!



ARRL WARC-92 DEFENSE FUND
225 Main Street
Newington, CT 06111



On The Road Again

Jake Kovalchek, AK21

May 19, 1991, Sunday, turned into a beautiful day. We had just returned from the Rochester area via US Air flight number 969. After locating my car, I returned home to pack the trailer to move out again to rendezvous with our group that would eventually go on to the Rally at Hamburg, New York, about 20 miles south of Buffalo, at the Erie County Fair Grounds. Our first leg took us from home to the rest stop at Hickory Run on the Northeast Extension of the Pennsylvania Turnpike, and upon arriving at about 8 PM (only about 2 hours late), I saw our contingent of trailers already parked and having fun in the talking stage of the caravan. Little did I know that that very day I was to be called upon to be the leader of that caravan, all the way to the final destination at the Hamburg site.

Let me explain something about a caravan and you'll be able to feel the air of expectancy that always follows when they greet their caravan leader. You see, when in a caravan, all you do is normally follow the trailer in front at a respectable distance, never close enough to read the trailer numbers in front of you. That, then, puts you about 300 feet behind the trailer in front, and allows any automobiles following you to safely pass and not be a burden to local traffic. They don't care about the route, or

about the road conditions or the distance we will travel, they just want to know at what time we have to get up to be on our way. So when I told them I was an early riser, and liked to start at about 5:30 AM, the vast majority fell into despair at the sound of an early start, but follow they would at whatever time I said, and indeed we moved out the next morning at 6:00 AM sharp!

I changed the coil on my mobile radio antenna system, the Hustler Mobile mount that has served me so well these past few years, and put on the 80 meter coil for check-in with the Rooster Net the following morning. I placed the 40 meter coil on the side of my trailer with a comment to myself that I must remember to put it back in my Suburban before I forgot it. You can imagine what happened after that. I drove off the next morning happily with the expectations of checking in early and then moving off to the RV Net that comes on at 7:00 AM on 7.233 MHz, and left the coil lying on the parking lot of our rest stop. I was to return there on my return trip after the rally but to no avail, the coil had disappeared, hopefully to a ham who could make full use of it.

Another quirk about a caravan is that if the caravan leader makes a mistake then we all make a mistake. You imagine 13 trailers trying to turn around on a lonely stretch of

CORESTATES CYCLING CHAMPIONSHIP

Gil Gilpin, W3SRU

June 9th marked the Phil-Mont Mobile Radio Club's 7th year of participation as a public service net for this professional championship cycle race. This is also the 7th year in which this event has been held in Philadelphia.

29 amateur radio operators manned a base station and 19 other locations around the course, providing excellent coverage. Amateur radio station W3TKQ, located in The Franklin Institute, was used as the base station. Traffic, related to police, race-marshals and medical problems, was handled during the 6 hour race. Fortunately, no serious accidents, such as have happened in past races, occurred. Net operations ran smoothly with new operators readily blending-in with the nucleus of veteran operators who have participated for a number of years.

N3FVI again did an excellent job as coordinator for the net operation. Phil-Mont

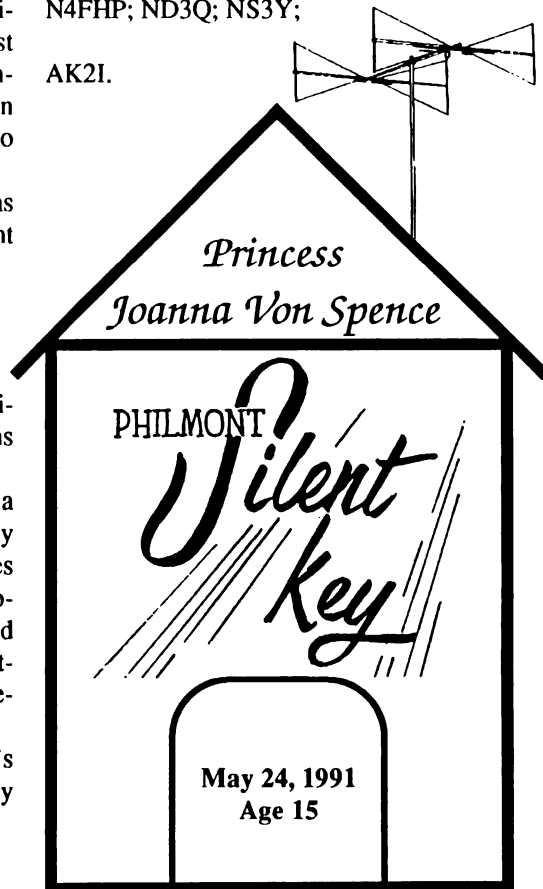
thanks the owners and operators of the 145.27 repeater for the use of their machine, and the non-members who operated in the net. Amateurs and stations participating included:

W3s SRU, TKQ, YHV, YLT; WB3JHX; WK3K;

KA3s AMO, BET, EBC; KB3s CT, IV; KF4LM;

N2KSX; N3s ALW, ELS, FTC, FTY, FTZ, FVI, GEN, GBM, GMH, IEI, IZZ, ZO; N4FHP; ND3Q; NS3Y;

AK2I.



⇒

on a golf course, and so much metal associated with the game, many lightning deaths occur during the playing of this sport.

Dangerous as it is, lightning serves a purpose in nature's scheme of things. By burning the air around it, a bolt causes oxygen and nitrogen to unite and form nitrogen oxide. When combined with water and oxygen, the nitrogen products that are created enter the soil and become essential ingredients for all plant life.

Dangerous to man, helpful to plants. It's lightning; nature's very own fourth of July celebration.

DLARC

MARYLAND HAMFEST



AND COMPUTER FEST

SPONSORED BY THE

BALTIMORE RADIO AMATEUR TELEVISION SOCIETY

SUNDAY, JULY 28, 1991

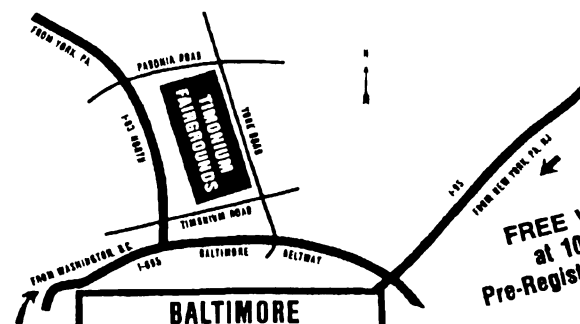
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THE W 3 T K Q

REPORT

by
Jake Kovalchek,
AK2I

Phase Two Slow... But Sure!

The second phase of our fund raising efforts have hit an economic lull, so I want to reassure everyone that, while we are waiting for more action, there are a number of things we are trying to do to improve the situation. For example: There are a number of specific items we still need in order to complete the station. While **Radio Shack** did donate a new computer we still do not have a printer. Our needs are simple, but a good printer is about \$350.00. Do we have a donor?

I wrote to **Cushcraft** Corporation, and while the Chairman of the Board, Mr. Ed. Hammond, indicated it was Cushcraft's policy not to make outright donations, he did indicate that he was willing, however, to allow us to buy the AOP1 Satellite Tracking Antenna system for one half-off the list price, or \$137.50. We also would have to buy this at **Hamtronics**, and that's great, but we need a donor for the antennas. Someone please?

Individual donations are gladly accepted, and a very attractive plaque is being planned to commemorate those who have donated at least \$50.00 to the building fund. Don't let W3TKQ down at this stage of the drive. We need a lot more money if we are to make the station a reality.

To those readers who are no longer active in the club, but continue to be affected by amateur radio, and especially Phil-Mont, we ask you for your support. I would like to have \$10.00 from each non-active member, and remember, if you donate \$50.00, your name and call sign is engraved on a plaque in the Institute.

You, the hard working, average member of the club, you have a stake in this venture also. We especially need your support, and while only a few have spoken out with \$500.00 donations, we need the support of the masses that cannot give that much—but give you must. Please, a \$10.00 donation made out to the Franklin Institute - for W3TKQ only - in the memo column, is desperately needed. Please do it today - while you're reading this column - we really need your help if we're to complete our mission and that's to give you a station you will be proud of in every respect. A station where you will be proud to say to your family, "I helped build this station, and some small part of me is in every contact that's made... forever." ... and it's tax deductible.

I will promise you this: Every dollar will be accounted for, and a report will be given when completed. Each person's gift will be acknowledged, and if we get enough money, every donor will be remembered in the station.



LIGHTNING: NATURE'S ZANY ZIG ZAGS

Ancient Greeks and Romans thought lightning was a weapon of the gods. In some countries, places struck by lightning are considered cursed.

But what is it really?

According to Webster's Lexicon Dictionary, lightning is a "discharge of atmospheric electricity from highly negative particles from a cloud to earth or to another cloud, resulting in a flash of light." Lightning that strikes the earth is composed of a single or series of electrical charges called "strokes." An increase in pressure along the path of a lightning stroke, with a rapid heating and expansion of the air, is what causes the "boom" we know as thunder.

Although the core of a lightning bolt is only one-half to three-fourths of an inch in diameter, it represents pure electrical energy. In fact, the super-heated air surrounding the core may reach temperatures as high as 54 thousand degrees Fahrenheit, and produce up to 30 million volts of electricity. So it's no wonder lightning can seem brighter than the sun.

It's also quick, which is the reason we see lightning before we hear the thunder. The rule of thumb is that since it takes five seconds for sound to travel one mile. We can compute how far away lightning is by counting the number of seconds between the flash and thunder, and dividing it by five.

Lightning can appear in several forms. Lightning is a single, jagged line, called **streak** lightning. A flash that trails off into a dotted line as it fades is known as **chain** or **bead** lightning. **Forked** lightning is a lightning flash in which several branches are visible. **Ribbon** lightning is created when wind separates the strokes of a flash, causing them to form parallel lines across the sky.

The lightning many of us call **heat** lightning is simply too far away for its thunder to be heard. **Sheet** lightning, which usually lights up large areas of sky, is hidden by clouds, or too far away to see the individual strokes.

Lightning strikes are far more common than most people realize. Meteorologists estimate that up to 44 thousand electronic (sic) storms pelt the earth daily, with anywhere from one thousand to two thousand lightning strikes per second. As many as 30 thousand buildings are damaged or destroyed by lightning annually. The Empire State Building, for example, is said to sustain 30 to 48 lightning strikes each year. But, it should be noted, that skyscrapers with continuous steel framing, and buildings with properly grounded lightning rods, offer excellent protection against lightning.

Since lightning is a killer, it's important for parents to teach their children the proper precautions to take when a storm is brewing. Make no mistake about it, lightning is attracted to water. Backyard pools, baths, showers—even puddles on the lawn—should be avoided. The same goes for stoves, dishwashers, washing machines, and gas-lighted fire-places, because lightning can travel along water and gas lines. Except for an emergency, it's not a bad idea to avoid the telephone.

Anyone caught outside during a storm should seek shelter immediately, preferably inside a building. The interiors of cars and trucks are somewhat safe spots to be in, provided the tires are well inflated, and the windows are rolled up. Tall trees, utility poles and just about anything made of metal should be avoided.

Golfers definitely should be wary of storms. Because of the prevalence of trees



LICENSEE:

Below are your Amateur Radio Licenses in sizes suitable for your wallet and for framing. Carefully cut the documents along the lines as indicated. Each license carries equal operating authority.

Cut Along This Line																			
THIS LICENSE SUBJECT TO CONDITIONS OF GRANT ON THE REVERSE SIDE. THIS LICENSE IS NOT TRANSFERABLE.	<table> <tr> <td>Call Sign</td> <td>Effective Date</td> <td>Expiration Date</td> </tr> <tr> <td>KB5PMC</td> <td>04/23/91</td> <td>04/23/01</td> </tr> <tr> <td>Operator Privileges</td> <td colspan="2">Station Privileges</td> </tr> <tr> <td>NOVICE</td> <td colspan="2">PRIMARY</td> </tr> <tr> <td colspan="3">FIXED STATION OPERATION LOCATION</td> </tr> <tr> <td colspan="3">SAME AS MAILING ADDRESS</td> </tr> </table>	Call Sign	Effective Date	Expiration Date	KB5PMC	04/23/91	04/23/01	Operator Privileges	Station Privileges		NOVICE	PRIMARY		FIXED STATION OPERATION LOCATION			SAME AS MAILING ADDRESS		
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JOHN D BOGART 2433 STONECREST DR ABILENE TX 79606	(Licensee's Signature) FEDERAL COMMUNICATIONS COMMISSION																		
FCC AMATEUR RADIO LICENSE FCC FORM 600 APRIL 1991																			

UNITED STATES OF AMERICA FEDERAL COMMUNICATIONS COMMISSION	
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KB5PMC	
JOHN D BOGART 2433 STONECREST DR ABILENE TX 79606	
Special Conditions	
Fixed Station Operation Location	
SAME AS MAILING ADDRESS	
Effective Date	Expiration Date
04/23/91	04/23/01
Operator Privileges	Station Privileges
NOVICE	PRIMARY
THIS LICENSE SUBJECT TO CONDITIONS OF GRANT ON THE REVERSE SIDE	
NOT TRANSFERABLE	
(Licensee's Signature)	

FCC NOW ISSUING NEW AMATEUR RADIO LICENSE

As of Monday, April 22, the FCC's Gettysburg, Pennsylvania licensing facility is issuing a new laser printed Amateur Radio license to all applicants.

Actually it is two licenses! One (shown here actual size) is pretty much the same layout as before - except it will be much easier to read since it will no longer be printed on carbon paper inside an envelope.

Both licenses are equal - one can be folded in half and carried in a wallet - or laminated. The other license (reduced here to 75% size) is 5"X7" and suitable for framing. We assume that the number (01430) is the sequential license number issued on April 23rd.

We discussed the new license with FCC/Gettysburg's Larry Weikert on April 27th and we were told that amateurs should not arbitrarily request duplicate licenses. They may, however, request a new license if the licensing information has changed (such as a new address, etc.)

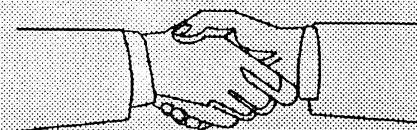
The two licenses are printed on one 8-1/2" X 11" (greenish banknote) sheet of paper. The reverse side indicates the Conditions of Grant.

W5YI Report—reduced

⇒ A Fund Raiser in the offing? Perhaps! How many remember a presentation called "The Symphony of Phil-Mont?" How many would enjoy another updated version, and would be willing to pay a price for admission, for the benefit of the building fund?

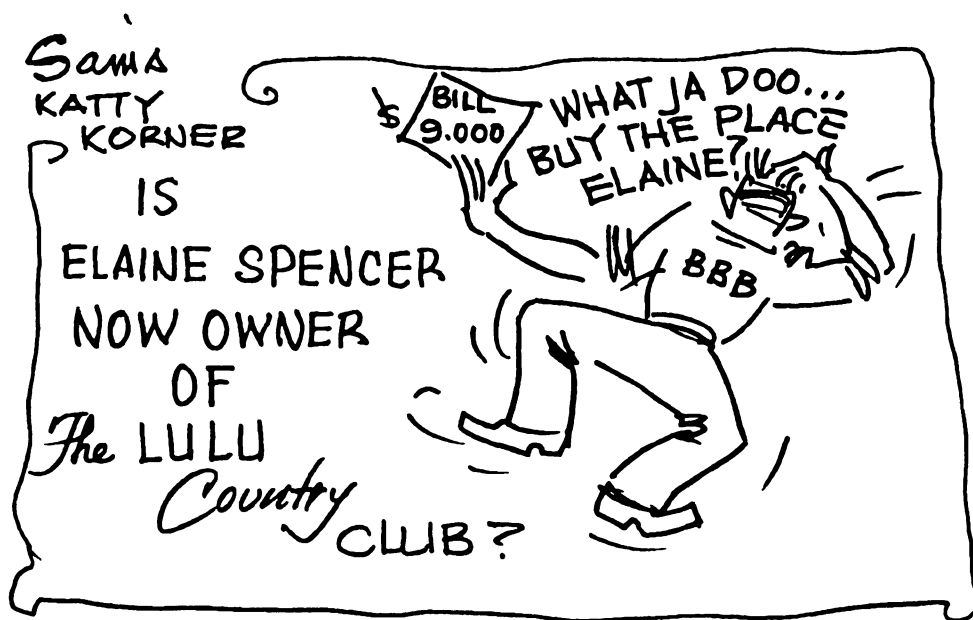
I'm also trying to arrange to have Mrs. Gioua Marconi Braga, the daughter of Guglielmo Marconi, allow us to have a mini display of her father's equipment on display at the station. I have also asked Mrs. Braga to help us dedicate the station when the time comes. By the way, I have heard from Channel 6 TV directly concerning the dedication ceremony, and they promised they will be there to cover it along with Channel 3 TV, and hopefully, Channel 10 as well.

Please, I hear all of you thanking me for my efforts at the station, but I cannot do it alone. You must help me by your emotional support, as well as your monetary support!



NEW MEMBER APPLICATION

CALL: K2ID
 NAME: Martin Gold
 HANDLE: Marty
 CLASS: Extra
 ADDRESS: 241 S. 6th St., Apt 1607
 Philadelphia, PA 19106
 HOME PHONE: (215) 592-1341
 BUSINESS PHONE: (215) 961-2060
 OCCUPATION: Teacher
 INTERESTS: VE program



1991

JULY

1991

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1	2 <i>SEASON FINALE</i> CODE PRACTICE NET at 8 PM AK2I	3 GENERAL MEETING at The Franklin Institute Refreshments at 7:00 PM Meeting starts at 7:30	4  <i>Independence Day</i>	5	6
7 2M NCS AK2I 10M NCS ANYONE 75M NCS W3PWG	8	9 <i>CODE PRACTICE</i> NET <i>resumes Sept 17</i>	10	11 LICENSE EXAMS at The Franklin Institute Registration begins at 6:00 Doors close at 6:30 PM <i>sharp!</i>	12	13
14 2M NCS N3FTY 10M NCS ANYONE 75M NCS W3AOA	15	16 <i>CODE PRACTICE</i> NET <i>resumes Sept 17</i>	17 DIRECTORS' MEETING at W3BBBz	18	19	20
21 2M NCS K3JJO 10M NCS ANYONE 75M NCS W3RCE	22	23 <i>CODE PRACTICE</i> NET <i>resumes Sept 17</i>	24	25	26	27
28 2M NCS NS3Y 10M NCS ANYONE 75M NCS AK2I <i>BRATS' hamfest</i>	29	30 <i>CODE PRACTICE</i> NET <i>resumes Sept 17</i>	31	<i>Fish and visitors smell in three days.</i>		